

CLAIMS

1. Method for managing data between user mobile stations (MS) equipped with a communication module (1), stationary terminals (3) associated with at least one service, and a plurality of mobile service means (8) equipped with a communication module (9) and adapted to ensure said service, characterised in that it includes the following steps:

a) by means of a mobile station (MS), a primary request is generated including data defining a request for obtaining a selected service at a terminal (3) installed proximate to said mobile station and associated with said service,

b) after receiving said primary request, a secondary request is generated including data defining a request for ensuring the selected service at said terminal (3),

c) said secondary request is received at the mobile service means (8) of said plurality that is closest to said terminal (3), so that said mobile service means stops at said terminal and provides said service requested by the user of said mobile station (MS).

2. Method according to Claim 1, characterised in that at step b) said primary request is received at the terminal (3), by means of a communication module (6), and said secondary request is generated at said terminal (3).

3. Method according to Claim 2, characterised in that said reception of said primary request takes place when the mobile station (MS) which generated it is located within the second transmission coverage zone (12) of said terminal (3).

4. Method according to either of Claims 2 and 3, characterised in that at steps a) and b) the generation and reception of primary requests is accomplished by ad hoc exchanges of messages.

5. Method according to Claim 4, characterised in that said primary request includes data defining a primary spatial value representing said selected service.

6. Method according to any of Claims 2 to 5, characterised in that at step c) said mobile service means (8) receives said secondary request when said terminal (3) is located within its third transmission coverage zone (13).

7. Method according to Claim 6, characterised in that at steps b) and c) generation and reception of the secondary request are accomplished by ad hoc exchanges of messages.

8. Method according to either of Claims 6 and 7, characterised in that said secondary request includes data defining a secondary spatial value representing said selected service.

9. Method according to Claim 1, characterised in that at step b) said primary request is received at a management server (S) equipped with a communication module (15), then the position of the terminal (3) proximate to the user mobile station (MS) on one hand, and that of the mobile service means (8) closest to said terminal and capable of providing said service defined in said primary request, on the other hand, are determined, and said secondary request is sent to this mobile service means (8) via said server (S).

10. Method according to Claim 9, characterised in that at step b) determination of the position of the nearest mobile service means (8) involves sending to all mobile service means (8) comprising said plurality an auxiliary request asking them to report their respective positions, then, upon reception of the replies returned by said mobile service means (8), identifying from these replies the mobile service means (8) closest to said terminal (3) and capable of providing said service defined in said primary request.

11. Method according to Claim 9, characterised in that at step b) determination of the position of the nearest mobile service means (8) is accomplished by comparing the respective positions of the mobile service means comprising the plurality and capable of providing said service defined in said primary request, with the position of said terminal (3).

12. Method according to any of Claims 9 to 11, characterised in that at step a) said primary request includes the position of said user mobile station (MS), and in that at step b) the position of the terminal (3) is determined from the position of the mobile station (MS).

13. Method according to any of Claims 9 to 12, characterised in that at step a) said primary request includes an identifier representing at least the position of said terminal (3), and in that at step b) at least the position of the terminal is determined from said identifier.

14. Method according to any of the foregoing claims, characterised in that, after receiving said primary request, information is sent to said mobile station (MS).

15. Method according to Claim 14, characterised in that at least some of said information at least represents the time required for said closest mobile service means (8) to arrive at said terminal (3).

16. Method according to either of Claims 14 and 15, characterised in that at least some of said information is of the advertising type.

17. Method according to any of Claims 14 to 16, characterised in that at least some of said information includes data defining at least one information site address accessible via the Internet.

18. Use of the method according to any of Claims 1 to 17 in the field of public transport, said mobile service means (8) being public transport vehicles, in particular buses and coaches, and the terminals (3) constituting all or part of bus stops.

19. Device for managing data between at least one user mobile station (MS) equipped with a communication module (1), stationary terminals (3) associated with at least one service, and a multiplicity of mobile service means (8) equipped with a communication module (9; 15) and capable of providing said service, characterised in that it includes i) first control means (2) intended to be implanted in said user mobile station (MS) and capable, upon the user's instruction, of generating a primary request including data defining a request to obtain a service selected at a terminal (3) installed proximate to said mobile station (MS) and associated with said service, ii) second control means (7; 14) capable, on receiving a primary request, of generating a secondary request including data defining a request for provision of the selected service at said terminal (3), and iii) third control means (10) implanted in each of said mobile service means (8) comprising said plurality and capable, in case of reception of a secondary request by the associated communication module (9), of ordering the associated mobile service means (8) to stop at said terminal (3) so as to provide said service requested by the user of said mobile station (MS).

20. Device according to Claim 19, characterised in that each of said terminals (3) is equipped with a communication module (6) and includes second control means (7).

21. Device according to Claim 20, characterised in that said communication modules (1,6) of the mobile station (MS) and of said terminals (3) respectively have a first (11) and a second (12) transmission coverage zone, and in that said communication modules (6) of said terminals (3) are arranged so as to accept a primary request when the mobile station (MS) which generated it is located within their second transmission coverage zone (12).

22. Device according to either of Claims 20 and 21, characterised in that said communication modules (1,6) of the mobile station (MS) and of said terminals (3) are respectively arranged to generate and accept a primary request by ad hoc exchanges of messages containing data delivered by said first (2) and second (7) control means.

23. Device according to Claim 22, characterised in that said first control means (2) are arranged to generate primary requests including primary data defining a primary spatial value representing said selected service.

24. Device according to any of Claims 20 to 23, characterised in that the communication module (9) of each of said mobile service means (8) has a third transmission coverage zone (13) and is

arranged to accept a secondary request when said terminal (3) is located within its third transmission coverage zone (13).

25. Device according to Claim 24, characterised in that said communication modules (6,9) of said terminals (3) and of said mobile service means (8) are respectively arranged to transmit and receive a secondary request by ad hoc exchanges of messages containing data delivered by said second (7) and third (10) control means.

26. Device according to either of Claims 24 and 25, characterised in that said second control means (7) are arranged to generate secondary requests including secondary data defining a secondary spatial value representing said selected service.

27. Device according to Claim 19, characterised in that said second control means (14) are implanted in a server (S) equipped with a communication module (15) and are arranged, on receiving a primary request, to determine on one hand the position of the terminal (3) proximate to the user mobile station (MS), and on the other hand the mobile service means (8) closest to said terminal (3) and capable of providing said service defined in said primary request, and to send to this mobile service means (8) said secondary request via the associated communication module (15).

28. Device according to Claim 27, characterised in that said second control means (14) are arranged, on receiving a primary request by the associated communication module (15), to send to all mobile service means (8) comprising said plurality an auxiliary request asking them to report their respective positions, then, upon receiving the replies returned by said mobile service means (8), to determine from these replies which mobile service means (8) is closest to said terminal (3) and capable of providing said service defined in said primary request.

29. Device according to Claim 27, characterised in that said second control means (14) are arranged, on receiving a primary request by the associated communication module (15), to compare the respective positions of the mobile service means (8) comprising the plurality and capable of providing said service defined in said primary request, with the position of said terminal (3), so as to identify the mobile service means (8) closest to said terminal (3).

30. Device according to any of Claims 27 to 29, characterised in that said second control means (14) are arranged to determine the position of a mobile station (MS) which has issued a primary request and to determine therefrom the position of said terminal (3).

31. Device according to any of Claims 27 to 29, characterised in that said first control means (2) are arranged to include in said primary request an identifier representing at least the position of said terminal (3), and in that said second control means (14) are arranged to determine from the

identifier contained in a received primary request at least the position of the associated terminal (3).

32. Device according to any of Claims 19 to 31, characterised in that said second control means (7; 14) are arranged, after receiving a primary request, to enable the communication of information to said mobile station (MS).

33. Device according to Claim 32, characterised in that said second control means (7; 14) are arranged to determine information representing the time required for said closest mobile service means (8) to arrive at said terminal (3).

34. Method according to either of Claims 32 and 33, characterised in that at least some of said information is of the advertising type.

35. Method according to any of Claims 32 to 34, characterised in that at least some of said information includes data defining at least one information site address accessible via the Internet.

36. Mobile station (MS), characterised in that it includes a communication module (1) and first control means (2) of a device according to any of Claims 19 to 35.

37. Mobile station (MS) according to Claim 36, characterised in that it is chosen from a group including mobile telephones and personal digital assistants (PDA).

38. Terminal (3), characterised in that it includes a communication module (6) and second control means (7) of a device according to any of Claims 19 to 35.

39. Terminal (3) according to Claim 38, characterised in that it is intended to be installed in a public place chosen from a group including bus or coach stops, airports and railway stations.

40. Transport vehicle (8), characterised in that it includes a communication module (9) and third control means (10) of a device according to any of Claims 19 to 35.

41. Transport vehicle (8) according to Claim 40, characterised in that it is arranged to provide public transport for persons.